



CASE 1919

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF  
CUI, ET AL.

S.N. 09/851,069

FILED: 08 MAY 2001

FOR: PROCESS FOR THE SELECTIVE  
MODIFICATION OF  
CARBOHYDRATES BY  
PEROXIDE CATALYZED  
OXIDATION

GROUP ART UNIT: 1731

EXAMINER: ALVO, MARC S.

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

DECLARATION UNDER RULE 132 (37 C.F.R. §1.132)

Sir:

I, Xiao-Yuan Cui, a citizen of the United States, currently residing at 4 Hatfield Court, Belle Mead, New Jersey declare as follows.

I am familiar with the issues raised in this case.

I graduated from Jilan University in Chang Chun, China in 1983 with a Bachelor of Science degree in Chemistry and from Kings College, London, England in 1994 with a Doctorate of Philosophy in Biochemistry. From 1995-1997, I conducted post-doctoral work at the University of Georgia in chemistry and biochemistry.

Since 1997, I have worked at National Starch and Chemical Company (NSCC). I am currently a Senior Associate in the Cereal Science Group, part of the Natural Polymer Group. My work at NSCC has been substantially related to enzymes and their functionality and properties relating to starch and other cereal products.

I am the inventor of five (5) U.S. patents or applications and numerous non-US patents and applications. I have published in various trade journals and have presented at trade shows and to the industry.

My experience has provided me with a strong knowledge of various enzymes, and their functionality and properties, particularly in the field of cereal chemistry.

The experiment below were conducted under my supervision and guidance to demonstrate that chloroperoxidase does not contain any chloride.

#### Materials

Chloroperoxidase – commercially available from Sigma Chemicals.

Silver nitrate

#### Testing

A. 20 microliters chloroperoxidase was diluted with 5 ml water to form a solution. 5 drops of 0.05 Molar silver nitrate solution was added.

B. 20 microliters chloroperoxidase was diluted with 5 ml of 0.1% aqueous NaCl solution to form a solution . 5 drops of 0.05 Molar silver nitrate solution was added.

#### Results

The results are shown in the attached photo.

As can be seen, there is no precipitate in Solution A, which contained only chloroperoxidase and water, while Solution B contained substantial white precipitate.

#### Conclusions-

It is well known in the art that silver nitrate precipitates out any chloride in solution to form a white precipitate. This test is quite sensitive and is conventionally used to show the presence of chloride.

In view of the experiments, it is clear that chlorperoxidase does not contain any chloride.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by a fine or imprisonment or both under 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Bridgewater, NJ, this 1-31-2005.  
location date

Xiaoyuan Cui  
Xiao-Yuan Cui

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